Testimony of Jack Roney on Behalf of the U.S. Sugar Industry on

"The Future of U.S. Sugar Policy"

Committee on Agriculture United States Senate Washington, D.C. July 17, 2001

Mr. Chairman, Senator Lugar, Members of the Committee: Thank you for the opportunity to testify before you today on issues critical to the future of the American sugar industry.

I am Jack Roney, director of economics and policy analysis for the American Sugar Alliance. I am proud today to speak on behalf of American growers, processors, and refiners of sugarbeets and sugarcane – 172,000 farmers, workers, and their families, in 27 states, employed directly and indirectly by the U.S. sugar producing industry.

I would like to describe to you the current plight of American sugar producers, the ways in which we are similar to other major U.S. program crops and the ways in which we are not, the domestic and foreign factors behind the financial and policy crises we are facing, and the legislative remedies that will work best for American sugar producers, consumers, and taxpayers. (The source of the data in this testimony is the U.S. Department of Agriculture, unless otherwise noted. Endnotes appear on page 24; Figures begin on page 25, Appendices on page 36.)

A. American Sugar Producers in Crisis

American sugar producers face economic, domestic policy and trade policy crises that profoundly threaten their existence.

1. Producer prices for sugar began falling in 1997 and 1998 and plummeted in 1999 and 2000. American sugar producers, both beet and cane, have been facing sugar prices at or near 22-year lows for most of the past two years. Raw cane and refined beet sugar producers' lost income on the 1996 through 2000

crops, relative to 1995-crop prices, has been ruinous and will likely total more than \$2.2 billion. (See table below and Figures 1-2.)

Cane and Beet Sugar Producer Lost Income on 1997-2001 Crops, Compared with 1996-Crop Prices

	Raw Cane Producer	Beet Sugar Producer	Total
	Lost Income	Lost Income	
		-Million dollars-	
1996/97	32	59	90
1997/98	30	261	291
1998/99	34	150	184
1999/00	333	645	979
2000/01*	116	566	682
Grand Total	\$545	\$1,681	\$2,226

^{*}Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October – March 2000/01 average prices.

Data Source: USDA

- 2. Unlike other program-crop farmers who have experienced low prices, American sugar producers have received no direct-payment income support from the government to cushion the financial blow of these historically low prices.
- 3. Since 1996, 17 beet and cane processing mills have closed or announced their closure (*Figure 3*). Other mills threaten closure. The nation's largest seller of refined sugar is in bankruptcy. Both this company and the nation's second biggest sugar seller are attempting to sell their beet processing or cane refining operations, but are hard pressed to find buyers or complete sales because of the financial uncertainty. Buyers of last resort have tended to be the growers themselves, desperate to find a way to stay in business. Failure to sell these operations could lead to additional mill closures.
- 4. Last year, for the first time in nearly two decades, sugar producers forfeited a significant quantity of sugar to the government. Cane and beet sugar 1999-crop forfeitures totaled 949,080 tons, raw value. The 793,000 tons of sugar remaining under government ownership have absorbed a large portion of producers' storage capacity and overhang the domestic market with a price-depressing effect. Wholesale refined sugar prices remain well below forfeiture

levels, which varies by region, and raw cane prices are barely above the forfeiture range (*Figures 4-5*).

- 5. The government is no longer able to limit sugar imports sufficiently to support prices and avoid sugar loan forfeitures. Within-quota guaranteed imports are too large and threaten to become larger. Non-quota imports are rapidly increasing.
 - Within quota: International trade commitments the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA) -- require the United States to provide a minimum import-access amount that equates to as much as 15 percent of its consumption, whether the U.S. market needs that sugar or not, under its essentially duty-free tariff-rate quota (TRQ) for sugar.
 - The Uruguay Round Agricultural Agreement (URAA) of the WTO commits the United States to importing no less than 1.256 million short tons per year. Actual U.S. needs the past two years have been substantially less than that.
 - The NAFTA granted Mexico access to the U.S. market of up to 276,000 tons per year, roughly 35 times Mexico's traditional access to our market. Worse yet, Mexico is now disputing this access amount, and is requesting virtually unlimited access to our market for their subsidized, surplus sugar.
 - Outside the quota: In addition, U.S. borders no longer effectively control the entry into the U.S. market of subsidized foreign sugar outside the TRQ, and these amounts will rise if not addressed:
 - A sugar syrup, called stuffed molasses, concocted solely to circumvent the TRQ, continues to enter through Canada, despite a U.S. Customs Service ruling to reverse that quota circumvention.
 - Above-quota entries from Mexico have occurred. These imports are made possible by NAFTA provisions reducing the so-called second-tier tariff on Mexican sugar, and Mexican sugar only, to zero by 2008, and were made economic by declines in the world dump market price.
 - The volume of non-TRQ entries from both countries threatens to explode. Barring resolution of these two import problems, no domestic policy solution for U.S. sugar will work.

B. Background on U.S. and World Sugar Markets, Policies

Before moving on to our policy recommendations, it is important to provide some background on the unique characteristics of the U.S. and world sugar market and policies.

Size and Competitiveness. Sugar is grown and processed in 16 states and 420,000 American jobs, in 42 states, are dependent, directly or indirectly, on the production of sugar and corn sweeteners. The industry generates an estimated \$26.2 billion in economic activity annually. A little more than half of domestic sugar production is from sugarbeets, the remainder from sugarcane. More than half our caloric sweetener consumption is in the form of corn sweeteners.

Sugar plays an important role in the overall U.S. agricultural economy. According to USDA data for the 1997/98-99/00 crop years, the value of U.S. sugar production averaged \$3.5 billion per year – about half the value of the wheat crop, or roughly equal to the combined values of the rice, sorghum, barley, and oats crops.

In the four states where sugarcane is grown, it tends to be a monoculture, with cane grown on the same land year after year – in Louisiana, for example, for more than two centuries and in Hawaii for more than one century. In some areas, sugarcane has been the only agricultural activity, and sometimes sole business activity, for generations. In the 12 states where sugarbeets are grown, beets play a key role in rotation with other crops. In both cane and beet growing areas, growers must either own processing facilities or contract with processing companies, or their crops have no value.

Sugar is an essential food ingredient and the U.S. sugar producing industry is highly efficient, highly capitalized, and technologically advanced. It provides 281 million Americans most of the sugar they demand, in 45 different product specifications and with "just-in-time" delivery that saves grocers and food manufacturers storage costs.

The United States is the world's fourth largest sugar producer, trailing only Brazil, India, and China. The European Union (EU), taken collectively, rivals Brazil as the world's largest producing region.

The United States is also the world's fourth largest sugar importer. Roughly 15-20% of U.S. sugar demand is fulfilled by essentially duty-free imports from foreign countries. Many of the 41 countries supplying sugar to the United States are developing economies with fragile democracies. These countries depend heavily on sales to the United States, at prevailing U.S. prices, to cover their costs

of production and generate foreign exchange revenues. More than half this imported sugar is produced at a higher cost than U.S. beet and cane sugar.

Despite some of the world's highest government-imposed costs for labor and environmental protections, U.S. sugar producers are among the world's most efficient. According to a study recently released by LMC International, of England, and covering the 5-year period ending in 1998/99, American sugar producers rank 28th lowest in cost of production among 102 producing countries, most of which are developing countries.² According to LMC, more than half the world's sugar is produced at a higher cost per pound than in the United States.

U.S. beet producers are the second lowest cost beet sugar producers in the world. U.S. cane sugar producers are 26th lowest cost of 63 cane producing countries, virtually all of which are developing countries with dramatically lower social standards and costs. American corn sweetener producers are the world's lowest cost producers of corn sweetener (*Figure 8*).

LMC acknowledged that the U.S. ranking is all the more impressive for two reasons. First, most sugar-producing countries are developing-country cane producers, with much lower government-imposed labor and environmental protection costs than the United States'. Second, the strong value of the dollar. LMC noted that the dollar has soared about two-thirds in the past 20 years against the currencies of most other cane-producing countries.

Because of their efficiency, American sugar farmers would welcome the opportunity to compete against foreign farmers on a level playing field, free of government subsidies and market intervention. Unfortunately, the extreme distortion of the world sugar market makes any such free trade competition impossible today.

World Dump Market. More than 120 countries produce sugar and the governments of all these countries intervene in their sugar markets and industries in some way. Examples abound. Brazil, the world biggest producer and exporter, built its sugar industry on two decades of fuel alcohol subsidies. Sugar markets in India and China, the second and third biggest producing countries, are controlled by state trading enterprises, as is Australia's, the world's third leading sugar exporter. (Figures 6 and 7, from LMC studies, highlight some of the tradedistorting practices among major sugar producers.)

Producers in the EU, taken as a whole the second biggest producer and exporter, benefit from massive production and export subsidy programs. The Europeans are higher cost sugar producers than the United States, but they enjoy price supports that are 40% higher than U.S. levels -- high enough to generate huge surpluses that

are dumped on the world sugar market, for whatever price they will bring, through an elaborate system of export subsidies. Sugar export subsidies, alone, in the EU in some years run over 20 cents per pound, higher than the entire raw cane sugar support level in the United States.

World trade in sugar has always been riddled with unfair trading practices. These distortions have led to a disconnect between the cost of production and prices on the world sugar market, more aptly called a "dump market." Indeed, for the 16-year period of 1983/84 through 1998/99, the most recent period for which cost of production data are available, the world average cost of producing sugar is 16.3 cents, while the world dump market price averaged little more *half* that -- just 9.5 cents per pound raw value ¹ (*Figure 9*).

Furthermore, its dump nature makes sugar the world's most volatile commodity market. In the past two decades, world sugar prices have soared above 60 cents per pound and plummeted below 3 cents per pound. Because it is a relatively thinly traded market, small shifts in supply or demand can cause huge changes in price.

As long as foreign subsidies drive prices on the world market well below the global cost of production, the United States must retain some border control. U.S. sugar policy is a necessary response to the foreign predatory pricing practices that threaten the more efficient American sugar farmers.

Elements of U.S. Sugar Policy. U.S. sugar policy is similar to other commodity programs in some ways, and not in others. Its essential elements are a non-recourse loan program, a loan forfeiture penalty, marketing assessments, and a tariff-rate quota (TRQ).

Like other commodity programs, sugar producers have access to non-recourse loans, which give producers the option of forfeiting their crop to the government to satisfy their loan if market prices fall below loan repayment levels. The U.S. raw sugar loan rate has been unchanged since 1985 at 18 cents per pound; the refined beet sugar loan rate has been frozen at 22.9 cents per pound since 1996.

Unlike other commodity programs, sugar producers:

- Have been saddled since 1996 with a penalty of one-cent per pound on sugar they forfeit, effectively reducing their intended support price by that amount—a range of \$50-100 per harvested acre;
- Have been burdened since 1991 with a marketing assessment a special fee levied on sugar producers, currently at 1.375 percent of the loan rate, initiated

to help reduce the federal budget deficit. After raising \$279 million from 1991 to 1999, the marketing assessment was suspended in fiscal 2000 and 2001, because the federal budget is now in surplus, but is set to resume October 1, 2001;

• Forfeited no significant quantities of their crop to the government from 1985 to 1999.

Since 1996, the only tool the government has had to manage U.S. supplies and avoid forfeitures is the import quota system. As events in 2000 proved, this tool is inadequate. Obligations under the Uruguay Round Agreement (URAA) of the World Trade Organization and the North American Free Trade Agreement prevent the U.S. government from reducing the TRQ much below 1.5 million tons, regardless of U.S. needs. The obligation in 2000 to import about 50 percent more sugar than the U.S. market required, plus leakage around the quota, led to market oversupply, depressed prices, and loan forfeitures.

Uniqueness of Sugar Market. Aside from the highly residual and volatile nature of the world sugar price, there are a number of factors that set sugar apart from other program commodities. These unique characteristics must be taken into account when considering domestic and trade policy options for sugar.

- 1. **Grower/Processor Interdependence**. Grain, oilseed, and most other field-crop farmers harvest a product that can be sold for commercial use or stored. Sugarbeet and sugarcane farmers harvest a product that is highly perishable and of no commercial value until the sugar has been extracted. Farmers cannot, therefore, grow beets or cane unless they either own, or have contracted with, a processing plant. Likewise, processors cannot function economically unless they have an optimal supply of beets or cane. This interdependence leaves the sugar industry far less flexible in responding to changes in the price of sugar or of competing crops.
- 2. **Multi-Year Investment**. The multimillion-dollar cost of constructing a beet or cane processing plant (approximately \$300 million), the need for planting, cultivating, and harvesting machinery that is unique to sugar, and the practice of extracting several harvests from one planting of sugarcane, make beet or cane planting an expensive, multiyear investment. These huge, long-term investments further reduce the sugar industry's ability to make short-term adjustments to sudden economic changes in the marketplace.
- 3. **High-Value Product**. While the *gross* returns per acre of beets or cane tend to be significantly higher than for other crops, critics often ignore the large investment associated with growing these crops. Compared with growing

wheat, for example, USDA statistics reveal the *total economic cost* of growing cane is nearly seven times higher, and beet is more than five times higher. With the additional cost for processing the beets and cane, sugar is really more of a high-value product than a field crop.

- 4. **Inability to Hedge.** The 1996 Freedom to Farm Bill made American farmers more vulnerable to market swings and far more dependent on the marketplace. Growers of grains, oilseeds, cotton, and rice can reduce their vulnerability to market swings by hedging or forward contracting on a variety of futures markets for their commodities. There is *no* futures market for beets or cane. Farmers do not market their crop and cannot take delivery of beet or cane sugar. The hedging or forward contracting opportunities exist only for the processors -- the sellers of the sugar derived from the beets and cane. These marketing limitations make beet and cane farmers more vulnerable than other farmers to price swings.
- 5. Lack of Concentration. World grain markets are overwhelmingly dominated by a small number of developed countries, but sugar exports are far more dispersed, and dominated by developing countries. This makes the playing field among major grain exporters comparatively level and trade policy reform relatively less complicated than for sugar.

The world wheat and corn markets, for example, are heavily dominated by a handful of developed-country exporters – the United States, the European Union, Australia, and Canada are four of the top five exporters of each. The top five account for 96% of global corn exports and 91% of wheat exports.

The top five sugar exporting countries, on the other hand, account for only two-thirds of global exports and three of these are developing countries. Even the top 19 sugar exporters account for only 85% of the market, and 16 of these are developing countries.

- 6. **Developing-Country Dominance.** Developing countries account for 73% of world sugar production and 69% of both exports and imports. Developing countries were, however, not required to make any significant reforms in the Uruguay Round, were given an additional four years to make even those modest changes, and are demanding special treatment again in the next trade round.
- 7. **Widespread Unfair Trade Practices.** Production, processing, sale, and distribution of sugar is distorted by government action in virtually all these markets, and the vast majority of world sugar exports from these markets over the past decades has been at prices well below the cost of producing sugar.

Suggestions by industrial sugar users and some foreign governments that this trade should be opened ignores this pattern of almost universal market distortion. Even the trade laws of the United States were never meant to cope with such widespread unfairness in trade.

C. Lower Producer Prices: No Consumer Benefit

American consumers and food manufacturers have long benefited from a U.S. sugar policy that has assured stable supplies of high quality sugar at low, stable prices.

U.S. retail refined sugar prices are 20 percent below the developed-country average. Sugar here is also about the most affordable in the world. In terms of minutes worked to purchase one pound of sugar, the United States is third lowest in the world, trailing only Switzerland and Singapore, and well below self-proclaimed free-trade paragons such as Australia, Brazil, and Canada⁴ (*Figures 10-11*).

Incredibly, U.S. retail sugar prices are virtually identical to what they were in 1990, though general consumer price inflation since that time has exceeded 30 percent.

But U.S. retail sugar prices could be even lower. The wholesale refined sugar price that we producers receive averaged a disastrous nine cents less per pound in 2000 than it did in 1996. The retail refined sugar price that consumers pay, however, did not drop at all. It even crept up a bit, from an average of 41.8 cents per pound in calendar 1996 to 42.4 cents in 2000.

The grocery chains and food manufacturers passed *none* of the lower producer prices for sugar along to consumers – neither in the prices of bags of sugar nor in the prices of sweetened products. Figures for sugar and sweetened products are shown in Figure 12 for 1996 to 2000. The relationship is just as strong even if one goes back to 1990 (*Figure 13*).

The volume of the money transfer from the pockets of sugar producers to the profit margins of the grocers and food manufacturers is staggering. Even more so when one considers that these groups argue to Congress each year that sugar producer prices should be reduced – even further – to benefit consumers.

Examining total U.S. refined sugar consumption and compared with 1995/96 prices: U.S. beet processors and cane sugar refiners lost over \$2.4 billion from 1996/97 to 1999/00, and are on track to lose another \$1.3 billion this year. *All* the producers' lost revenue has flowed directly to the bottom line profits of grocers

and food manufacturers. Consumers have received none of the benefit of lower producer prices. (See table below and Figures 14-16.)

In fact, the retailers have actually continued to raise sugar and sweetened product prices during this period, while calling for lower producer prices to help consumers. Wholesale refined sugar prices during 1997-2001 have averaged nearly 4 cents per pound *less* than in 1996. Meanwhile, grocers have charged an average of almost 2 cents per pound *more* for refined sugar during 1997-2000, and the food manufacturers have boosted the prices they charge for highly sweetened products, such as candy, cereal, ice cream and baked goods, by 4-14 percent.

A recent study by the United States International Trade Commission noted that producer prices for sugar have been dropping while consumer prices for sugar and sweetened products are rising. The ITC wrote: "As a result, the price margins have

Sugar and Product Price Changes Since 1996: Producer and Consumer Losses and Grocer and Food Manufacturer Gains, 1997-2001

	Total Producer Losses from Lower Wholesale Price	Percent of Producer Loss Passed Through to Consumers	Total Consumer Losses from Higher Retail Prices	from L	ower Produ	anufacturer Gains ucer Prices and ar and Product **
1996/97	-Million dollars-			Total +515	Grocers +206	Food Manufacturers +309
1997/98	-575	0	-375 -349	+924	+370	+554
1998/99	-336	0	-367	+703	+281	+422
1999/00	-1296	0	-295	+1591	+637	+955
2000/01*	-1309	0	-264	+1573	+629	+944
Total	-\$3,655	0	-\$1,650	\$5,306	\$2,122	\$3,184

^{*}Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October – March 2000/01 average prices.

been widening each year, creating greater disparity between the price processors receive for the bulk product and the price retailers receive for final, packaged product." ⁵

With the combination of lower producer prices for the sugar they buy, and higher consumer prices for the sugar and products they sell, the grocers and food manufacturers are reaping additional revenues, relative to 1996 sugar prices, of

^{**}Approximately 40 percent of U.S. sugar consumption is direct, the remainder is an ingredient in food products. Data Source: USDA

\$5.31 billion during 1997-2001. Consumers "benefits" from the lower producer prices have been negative. Since about 40 percent of U.S. sugar sales are direct to consumers, in boxes or bags, the grocery chains' share of this windfall is \$2.12 billion. With the bulk of our sugar consumption in product form, the food manufacturers' share amounts to \$3.18 billion.

Clearly, the purpose of the opposition to U.S. sugar policy by these sweetener-user corporations is to increase their profits, not to benefit consumers, as the sweetener user corporations contend. The contrast is stark -- \$3.7 billion in lost producer revenues during 1997-2001; \$5.3 billion in additional user profits from the lower prices they pay producers for sugar and the higher prices they charge consumers for sugar and sweetened products.

Lack of competition among food retailers apparently is the main reason these companies can succeed in not passing along to consumers the lower prices they pay for sugar and other agricultural products. The proclivity, and the ability, of retailers to absorb savings on agricultural product purchases, rather than pass them along to consumers, were described in a recent paper by Professor Neil Harl of Iowa State University. Harl noted the alarming increase in concentration, and reduced competition, among food retailers. He wrote: "In 1992, the five leading food retail chains controlled 19 percent of grocery sales" but that figure is "42 percent in 2000" and "unless mergers are curbed (will) reach 60 percent within three years."

D. Shaping Future Sugar Policy: What Sugar Has in Common with Other Major Commodities

It is important to put the discussion of future U.S. sugar policy in the context of the ways we are similar to other program crops, and the ways we are not.

Like other American farmers, we are:

- 1. *Efficient by world standards*, with costs of production below the world average.
- 2. Ready, willing, and able to compete with foreign countries on a genuine level playing field, free of government programs that distort the terms of trade.
- 3. *In favor of free trade*. The U.S. sugar industry has endorsed the goal of complete, multilateral free trade in sugar since the initiation of the Uruguay Round of the GATT, in 1986 with the understanding that movement toward free trade must be made in a reasonable, equitable manner, that does not unfairly disadvantage efficient American producers in the process.

- 4. Concerned that we not lose our market to subsidized foreign producers while we move toward our common free trade goal.
- 5. A key part of the U.S. agricultural economy, and absolutely crucial to the rural economy of many areas.
- 6. *Reeling from low prices*. While last year's prices were at a 27-year low for soybeans, a 25-year low for cotton, a 14-year low for wheat and for corn, and an 8-year low for rice, ⁷ sugar prices were at a 22-year low.

E. Shaping Future Sugar Policy: What Sugar *Does Not* Have in Common with Other Major Commodities

In shaping U.S. sugar policy, there are also a number of critical factors that distinguish us from other program commodities. We are:

- 1. *Net importers*. Unlike the surplus crops, the United States has always been a deficit producer of sugar.
- 2. Fearful of losing our own <u>domestic</u> market to subsidized foreign competition. Surplus crop producers are mainly fearful of losing their <u>export</u> markets to subsidized foreign producers. For American sugar producers, that concern is much closer to home.
- 3. Obligated to remaining a deficit producer. Though American sugar producers are efficient, and many would like to expand production to reduce unit costs and better cope with low prices, the U.S. government has agreed to international trade rules that force us to import large quantities of sugar. Currently, about 15 percent of our market is committed, under WTO and NAFTA rules, to foreign sugar producers.
- 4. Threatened by possible further increases in our import obligations through another WTO round or through new bilateral or regional trade agreements currently being negotiated.
- 5. Threatened by lack of control of our borders from subsidized foreign sugar, most specifically, by stuffed molasses world dump market sugar from Brazil, Colombia, and other countries entering through Canada or potentially similar cane syrup products from other countries, and by second-tier sugar from Mexico.

- 6. Not eligible to receive any of the income support the government, fittingly, has provided to other program crop farmers. While AMTA, loan deficiency, and other payments totaled a badly needed \$74 billion to other farmers during 1996-2000, sugar producers received no income-support payments, and, in fact, paid \$178 million in marketing assessments to the Treasury during that period.
- 7. Far less able than other farmers to take advantage of the planting flexibility that was a hallmark of the Freedom to Farm Bill. Sugarbeets and sugarcane are only worth growing if the farmers have either made the huge investment in a processing facility or contracted with, and committed their acreage to, a processing company. In either case, the farmer has made a multiyear commitment. Switching to another crop as prices change would negate his investment, or defy his contract.

Moreover, sugarcane is not only a monoculture in most areas where it is grown, but is also a multi-year crop. Two to four harvests are generally achieved from one planting.

8. *Unable to absorb additional domestic production or imports*, without even more profound economic harm to the industry. With nearly 800,000 tons of surplus sugar in CCC inventory, the U.S. sugar market is already badly oversupplied.

F. Shaping Future Sugar Policy: Short-Term Actions Needed; Long-Term Options Limited

For the reasons outlined above, the U.S. sugar industry recognizes that the need for immediate administrative and legislative actions is urgent, but our longer term policy options are limited.

Before we can look toward the legislative changes that are necessary in the next Farm Bill, we must address the immediate sugar oversupply situation that continues to depress prices and threatens further loan forfeitures this year, and the trade issues that threaten to exacerbate this year's problems and make long-term solutions impossible. These actions can, and should, be taken concurrently.

G. Sugar Policy Recommendations: Short-Term Actions -- 2001

The U.S. sugar industry strongly urges that Congress or the Administration take the following actions to help American sugar producers out of our deepening economic crisis and create the economic and policy environment in which we can confidently fashion a successful longer term sugar policy.

1. Close the "Stuffed Molasses" Import Loophole. Stuffed molasses is a sugar syrup, concocted in Canada, by a British firm, using mostly Brazilian and Colombian sugar, for the sole purpose of circumventing the U.S. sugar import quota. (Appendix A provides more details.)

Approximately 125,000 tons of sugar are leaking into the U.S. market annually in this fashion. The accumulation of these imports was a significant factor in the sugar loan forfeitures of fiscal 2000. This additional sugar diminishes the import share of legitimate U.S. import quotaholding countries in years when the overall import quota is above the WTO minimum, and oversupplies the U.S. market and depresses our price in the years, such as this one and the past two, when imports are at the WTO minimum. The amount of sugar unfairly entering the U.S. market as stuffed molasses, or mimic products, is certain to grow if this loophole is not closed.

The U.S. sugar industry heartily endorses legislation pending (S. 753), cosponsored by 22 Senators and introduced by Senators Breaux of Louisiana and Craig of Idaho, which would address this import quota loophole and restore some degree of certainty to the U.S. market.

While this legislation is not in the Agriculture Committee's jurisdiction, the stuffed molasses loophole has a direct and immediate impact on the Administration's ability to administer sugar policy and maintain a viable domestic industry. We request the Committee's support in resolving this matter.

Unless the stuffed molasses loophole is closed, no long-term sugar policy that we propose here today could possibly be effective.

2. **Address the Mexico Access Issues.** The NAFTA requires the United States to: import up to 276,000 tons of sugar per year duty-free from Mexico through 2008, whether we need the sugar or not; reduce our second-tier tariff on sugar imports from Mexico to zero by 2008; and have free trade in sugar with Mexico beginning in 2008.

Mexico is disputing the legitimacy of the NAFTA sugar provisions, and is claiming, through a dispute resolution process it initiated, that Mexico should have virtually unlimited duty-free access to the U.S. sugar market, beginning this year. Furthermore, unlimited quantities of second-tier Mexican sugar could swamp the U.S. market at any time. (Appendix B provides a brief chronology of NAFTA sugar developments. Also, Appendix C provides the sugar industry's views on the proposed Free Trade Area of the Americas.)

The U.S. is abiding by its NAFTA sugar commitments. However, the U.S. sugar market is oversupplied, financially depressed, and does not need an additional pound of Mexican sugar. Furthermore, the Mexican sugar surplus that it seeks to unload on the U.S. market is the result of Mexican government subsidies so generous that, since the NAFTA began, production has increased far in excess of Mexican needs.

The U.S. sugar industry fully supports efforts by the Administration to renegotiate sugar access provisions of the NAFTA in a manner that will help restore balance to the sugar markets of both countries.

We support a sugar for fuel ethanol program that would simultaneously address Mexico's problems of sugar oversupply, possible job loss in cane growing areas, and air and water pollution.

Unless the Mexico access problems are resolved, no long-term sugar policy that we propose here today could possibly be effective.

3. Eliminate the Marketing Assessment. U.S. sugar producers began paying a marketing assessment of 1 percent of the cane and beet loan rates in 1991, for the express purpose of helping to reduce the federal budget deficit. Payments to other crop producers were reduced in the 1990 Farm Bill for the same purpose, but payments to sugar producers could not be reduced because sugar producers did not, and still do not, receive any. This unwelcome burden on sugar producers thus made U.S. sugar policy not just "no cost," as it had been, by statute, since 1985, but also a revenue raiser.

Marketing assessments have not been required of the roughly 15 percent of U.S. consumption that is foreign sugar. This provides the imported sugar a marketing advantage, compared with domestic production.

The amount of the assessment was raised twice, the second time in the 1996 Farm Bill, to 1.375 percent of the sugar loan rates. Sugar producers paid \$279 million in marketing assessment fees from 1991 to 1999. With the federal budget then, as it is now, in surplus, the marketing assessment fee was suspended in fiscal 2000 and 2001, but is scheduled to resume, beginning October 1, for fiscal 2002 and 2003, the remaining years of the 1996 Farm Bill.

American sugar producers find it curious, at best, that we should have to continue to pay this deficit-reduction marketing-assessment fee when the federal budget is now in surplus. This unique fee is clearly no longer necessary, and poses an excruciating burden – approximately \$40 million per year – on producers struggling with extremely low prices, many on the brink of

bankruptcy. It is inconceivable to us that, while Congress prepares to provide over a trillion dollars in tax cuts because of budget surpluses, a struggling industry would continue to be assessed to reduce a deficit that no longer exists.

We, therefore, urge that Congress eliminate marketing assessments on sugar producers under the current Farm Bill. Furthermore, we strongly oppose any future assessments that increase our costs and reduce our competitiveness.

4. Eliminate the Sugar Forfeiture Penalty. The 1996 Farm Bill included a provision, unique to the sugar program, that forces sugar producers to pay a one-cent per pound penalty, raw value, to the government for each pound of sugar they forfeit. This provision had the effect of reducing the sugar support price by that amount, or about 6 percent – making sugar the only commodity to incur an effective support price reduction in the 1996 Bill. The effective cost to American sugar producers: \$180 million per year. In addition, sugar producers last year, during a period of severely low prices and economic stress, were forced to pay the government \$18.7 million on the sugar they forfeited.

We strongly urge that the Congress eliminate the forfeiture penalty for the remaining two years of the current Farm Bill (fiscal years 2002 and 2003), and that no such penalty be included in future legislation.

5. **Provide Sugar a Share of the Budget Baseline**. The U.S. sugar industry would prefer that sugar remained a no-cost policy – as it had been every year from 1985 to 1999. Last year, however, the government's tools to manage a no-cost U.S. sugar policy proved to be inadequate, and sugar sustained a cost. The cost was modest – an estimated \$465 million – the value of sugar forfeited by producers and now in government ownership. That cost likely will be reduced, and could be more than offset, by the eventual sale of the government-owned sugar.

The U.S. is no longer able to avoid forfeitures and ensure a no-cost program, because: international trade commitments prevent it from reducing imports below the WTO and NAFTA minimum; it has not been able to control non-quota imports; and it lacks authority to impose domestic production controls. Unless these supply problems are solved, the U.S. is likely to continue to face some cost for its efforts either to balance the market or to provide income supports.

As a safeguard, in the event that the U.S. remains unable to solve import and domestic supply problems in a no-cost fashion, the U.S. sugar industry believes sugar should be included in government estimates of future commodity program spending.

Sugar's share cannot be based on past spending because there were no sugar expenditures. Sugar's share of CCC outlays for the major commodities during 1991-99 was non-existent, because sugar was a net revenue raiser for the CCC each of these years. Sugar's share of net outlays in fiscal 2000, the only year in the past 16 of any sugar net outlays, was 1.4 percent. The CCC anticipates net revenues again this year, because of the expected sale of some sugar, and in the next two fiscal years because of the resumption of the marketing assessment fee paid by sugar producers.

The most practical alternative approach would be to examine sugar's share of the value of production of the major program crops. According to USDA statistics, sugar's average share of the value of production of the major program crops (wheat, corn, sorghum, barley, oats, rice, cotton, tobacco, soybeans and peanuts) during the three crop years 1997/98-99/00 was 6.1 percent (*Figure 17*).

The industry recommends that an outlay of this proportion, about 6 percent, be included in planning for future commodity expenditures. We further recommend that, should our import and domestic supply problems be resolved, the unspent portion of the sugar baseline should be devoted to other commodity programs.

H. Sugar Policy Recommendations: Long-Term Actions – Next Farm Bill – Basic Elements

U.S. sugar policy recommendations for the next Farm Bill are shaped essentially by the following factors, which have limited our policy options, but upon which we have industry unanimity:

- The need to restore balance to the U.S. sugar market, with economic stability, returns from the marketplace that approximate costs of production and the opportunity for efficient American sugar producers to remain in business;
- The industry's desire to continue to derive its returns from the marketplace, and not from the government, and to maintain a no-cost, or low-cost, program, in the face of potential U.S. budgetary and WTO program-expenditure limitations;
- The inability of USDA to administer a no-cost program, providing stable market prices and avoiding loan forfeitures, with the TRQ as its only supply-control mechanism.

The industry studied carefully the policy path of joining with the other program crops in the AMTA and marketing loan income-support programs. After careful, realistic analysis we concluded the direct-payment route would not work for sugar.

The policy path we are recommending can be effective only if the United States regains control of its borders, through resolution of the stuffed molasses and Mexican access problems.

The policy that we recommend has four basic elements:

- 1. Continuation of the non-recourse loan program, with beet and cane sugar loan rates no lower than current levels and rebalanced relative to soybean loan rates, consistent with the rebalancing plan proposed by other farm groups.
- 2. Retention of the Secretary's authority to limit imports under the tariff rate quota system, consistent with WTO and NAFTA import minimum requirements.
- 3. Operation of the program at little or, preferably, no cost to the government.
- 4. An inventory management mechanism, administered by the government, to balance domestic sugar marketings with domestic demand and import requirements and provide stable market prices at a level sufficient to avoid sugar loan forfeitures.

The industry concluded unanimously that inventory management is the only policy path that can restore balance and stability to the U.S. market over the long run, with minimal, if any, budgetary expenditures.

Since the government requires us to reserve such a large share of our market for foreign producers, and because we remain committed to earning our revenues from the marketplace rather from government payments, it is essential that the government resume potential limits on our sugar marketings.

Inventory management measures should be:

- Established to balance the domestic market.
- Implemented only when the quota circumvention problem has been successfully addressed and when the U.S.-Mexico dispute over trade in sweeteners has been resolved to ensure the threat of market imbalance from second-tier imports is eliminated.

- Designed in a manner to retain planting and production flexibility, though sugar marketings may be restrained in some cases. Producers will still have the ability to expand marketings at a rate of growth consistent with U.S. consumption growth (less any foreign access commitments).
- Designed in a manner that does *not* provide producers an incentive to increase marketings to maximize market shares should the control measures be imposed.
- Designed in a manner that only producers who expand marketings in excess of the rate of growth in domestic demand would be required to curtail marketings when the program is in effect.

We propose a program built upon the permanent law marketing allotment program of the 1990 Farm Bill, with modifications to reflect the above goals and better reflect current market realities.

In the 1990 Farm Bill, allotments were triggered only when forecast imports for domestic consumption were less than 1.25 million short tons. The trigger level in these permanent law provisions needs to be updated to reflect current import obligations under international trade agreements.

There were no constraints on sugarbeet or sugarcane planting or on sugar production. However, when allotments were in place, sugar companies' marketings could not exceed their base. Production in excess of marketings could be stored and marketed later, or sold in non-domestic-food uses. These features should remain in place.

Following our testimony in April before the House Agriculture Committee, we provided the Chairman, at his request, legislative language on marketing allotments and the other legislative proposals contained in this testimony. We would be pleased to provide the same language to you, Mr. Chairman, if you wish.

I. Sugar Policy Recommendations:Long-Term Actions – Next Farm Bill – Related Elements

There are a number of related elements that we recommend for future sugar policy legislation:

5. **Loan Rate Rebalancing**. The U.S. raw sugar loan rate has been the same since 1985. General price inflation over the past 15 years has been 60.0%. Adjusted for inflation, the 18-cent loan rate is now worth only 10.8 cents.

Input costs paid by farmers have risen steadily, with the exception of energy and fertilizer costs, which have skyrocketed this past year. In some areas, farmers' and processors' fuel costs are four to six times higher than just one year ago.

U.S. sugar market prices have dipped to 22-year lows in the past two years and the industry is in a financial crisis. But sugar producers have received none of the substantial income provided, appropriately, by the government to other crop producers under financial stress. U.S. sugar policy, in fact, continued to run at a profit to the U.S. Treasury until fiscal 2000, when the government incurred some cost from the first significant sugar loan forfeitures in 16 years.

American sugar producers support the concept of equity among crops. In order to restore some equity, and better provide American producers the opportunity to regain financial stability, we endorse the loan rebalancing initiative recently outlined to this Committee by the American Farm Bureau Federation and supported by other producer groups. The Farm Bureau initiative would achieve a rebalancing of other crop loan rates relative to soybean loan rates, through the upward adjustments of the non-soybean crop loan rates.

Preliminary analysis suggests that, under the formula proposed by the Farm Bureau, the raw cane and refined beet sugar loan rates would increase modestly, by 3.7 percent. This would be the lowest percentage adjustment among the non-soybean program crops, which range from 4.1 to 32.1 percent.

A 3.7-percent adjustment would increase the raw cane loan rate from 18.00 cents per pound to 18.67 cents and the refined beet sugar loan rate from 22.90 cents per pound to 23.75 cents. Though these increases would be modest, they could be critical for the survival of sugar producers on the brink of bankruptcy from the brutally low prices of the past two years.

- 6. Make Loans Available on In-Process Sugars and Syrups. The sugar industry recommends that beet and cane processors should be permitted to put in-process sugars and syrups under loan, as well as crystalline sugar. Syrup is less costly to store than crystalline sugar, and processors' ability to put it under loan would increase their marketing flexibility, better facilitate orderly marketing, increase their use of the loan program, and make the loan program a more effective price support mechanism. (Appendix D supplies more detail behind this proposal.)
- 7. Clarify Ability to Forfeit Sugar Loans Made in September. The sugar industry recommends that Congress clarify its intention that all CCC nonrecourse loans made to sugar processors are subject to forfeiture. All CCC

loans must either be paid or forfeited by the end of the fiscal year, yet the ability to forfeit loans made in the month of September currently is thwarted by a regulatory requirement that processors give a 30-day notice of intent to forfeit. Hence, loans made in September cannot be forfeited that month because it is impossible to comply with this 30-day notice requirement before the end of the fiscal year--September 30.

Elimination of the 30-day notice impediment will increase processors' marketing flexibility, better facilitate orderly marketing, increase their use of the loan program, and make the loan program a more effective price support mechanism.

8. **Restore Bankruptcy Protection for Growers.** The sugar industry recommends reinstatement of a provision of the 1985 Farm Bill (P.L. 99-198, Section 903) designed to protect growers in the event of a beet or cane processing company bankruptcy. The need for such protection has become more acute with the severe financial stress of the U.S. sugar industry.

Under this provision, growers are assured that they will receive at least their minimum share of the forfeiture value of the sugar produced under contract with the processor. If a processing company with any sugar under loan goes bankrupt and is unable to provide growers the full payment the growers would otherwise have received should their sugar have been forfeited, the CCC makes up the difference. If a processing company has not put any sugar under loan, the growers are not protected and the CCC is not liable.

The only time this provision was exercised was following a beet processor bankruptcy in 1985, and the cost to the CCC was approximately \$20 million.

9. Eliminate 100-Point Surcharge on Sugar-Loan Interest Rates. Commodity loans had traditionally been made available to farmers and processors at an interest rate equal to the CCC's cost of acquiring the money. The 1996 Farm Bill, in an effort to reduce the federal budget deficit, required that the CCC make loans available at an interest rate 100 points, or one percentage point, higher than the CCC's acquisition cost.

The higher interest rate is not only a burden on producers, but has limited use of the loan program where commercial rates may prove to be lower. Lower participation reduces the price-support ability of the loan program for all producers. Non-participants in the loan program have no price safety net.

With the budget now in surplus, the higher interest rate charge is no longer necessary as a revenue raiser.

Because of its extreme financial duress, the sugar industry recommends that the 100-point surcharge on sugar-loan interest rates be eliminated.

10. Establish a Sugar Storage Facility Loan Program. The industry recommends the establishment of a sugar storage facility loan program to provide financing for sugarcane and sugar beet processors to build or upgrade storage and handling facilities for raw and refined sugars. Such a program will promote the orderly marketing of sugar supplies, strengthen the sugar processing industry, and enhance the marketing opportunities available to farmers and processors.

We recommend that such a program be administered by the Commodity Credit Corporation and provide loans for a minimum term of 7 years.

- 11. **Other Concerns.** The U.S. sugar industry makes the following related recommendations:
 - Sugar Consumption. The Farm Bill should defend the consumption of sugar, and the USDA should not endorse food consumption guidelines that are not based on generally recognized science.
 - Research. The government (USDA) should support improvements to the efficiency of the U.S. sugar industry through continued funding of research into improved sugarbeet and sugarcane production techniques.
 - *Biotech*. The government (USDA) should take all reasonable measures to educate the general public regarding the benefits, and lack of risks, associated with advances in biotechnology and genetically enhanced seeds.

J. Summary and Conclusion

To summarize, Mr. Chairman: Recognizing the severity of our economic distress, the uniqueness of sugar markets, and the need for long-term balance and stability, the sugar industry has made the following recommendations, for the benefit of American sugar producers, consumers, and taxpayers.

Short-term recommendations, 2001:

- 1. Close the "stuffed molasses" import-quota loophole.
- 2. Solve Mexico import access issues.
- 3. Eliminate the sugar "marketing assessment" fee.
- 4. Eliminate the sugar loan forfeiture penalty.

5. Provide sugar a share of the budget baseline.

Long-term recommendations, the next Farm Bill, basic elements:

- 1. Continue the non-recourse loan program.
- 2. Retain the Secretary's authority to limit imports under the tariff rate quota system.
- 3. Operate the program at little or, preferably, no cost to the government.
- 4. Resume a government-administered inventory management mechanism, similar to that contained in the 1990 Farm Bill, and implemented once our import-quota circumvention and Mexican import-access problems are solved.

Long-term recommendations, the next Farm Bill, related elements:

- 5. Rebalance loan rates.
- 6. Make loans available on in-process sugars and syrups.
- 7. Clarify processors' ability to forfeit sugar loans made in September.
- 8. Restore processor bankruptcy protection for growers.
- 9. Eliminate the 100-point surcharge on sugar-loan interest rates.
- 10. Establish a sugar storage facility loan program.

The sugar industry is working diligently with the Congress and the Administration to solve the immediate threats – stuffed molasses and Mexico – to U.S. sugar policy and to address the current surplus sugar situation. We are eager to work with Congress and the Administration on the basic changes to U.S. sugar policy that will restore long-term stability and economic viability to the American sugar producers, with ample benefit for our consumers and at little or no cost to American taxpayers.

We thank you again for convening this timely hearing and providing us the opportunity to testify.

Endnotes

- 1/ LMC International Ltd., "The Importance of the Sugar and Corn Sweetener Industry to the U.S. Economy," Oxford, England, August 1994
- 2/ LMC International Ltd., "The LMC Survey of Sugar and Production Costs: The 2000 Report," Oxford, England, December 2000
- 3/ LMC International Ltd., "Sugar Marketing Entities Around the World: A Profile of the Competitive Nature of World Trade," Oxford, England, November 1996
- 4/ LMC International Ltd., "Survey of World Retail Sugar Prices, 1999 Prices," Oxford, England, February 2000
- 5/ United States International Trade Commission, "Industry & Trade Summary: Sugar," USITC Publication 3405, Washington, D.C., March 2001
- 6/ Neil E. Harl, Professor of Economics, Iowa State University, "*The Structural Transformation of the Agricultural Sector*," presented at the conference, "Fixing the Farm Bill," Washington, D.C. March 27, 2001
- 7/ Robert Paarlberg, Professor of Political Science, Wellesley College, "*The Political Climate for the Farm Bill Debate*," presented at the conference, "Fixing the Farm Bill," Washington, D.C. March 27, 2001

Figure 1
Cane and Beet Producer Lost Income on 1997-2001 Crops,
Compared with 1996-Crop Prices

Raw Cane		FY19	96 Ave	rage Price	Actu	Producer Loss		
Fiscal Year	Crop Size -Million tons, raw value-	-¢/pound-	-\$/ton-	Total Value -Million dollars-	-¢/pound-	-\$/ton-	Total Value -Million dollars-	(compared w/1996 price) -Million dollars-
1995/96	3.454	22.50	450.00	1,554	22.50	450.00	1,554	
1996/97	3.191	22.50	450.00	1,436	22.00	440.00	1,404	32
1997/98	3.631	22.50	450.00	1,634	22.09	441.80	1,604	30
1998/99	3.951	22.50	450.00	1,778	22.07	441.40	1,744	34
1999/00	4.065	22.50	450.00	1,829	18.40	368.00	1,496	333
2000/01*	4.070	22.50	450.00	1,832	21.08	421.60	1,716	116
Total								\$545

Refined Beet		FY19	FY1996 Average Price			Actual Average Price				
Fiscal Year	Crop Size -Million tons, raw value-	-¢/pound-	-\$/ton-	Total Value -Million dollars-	-¢/pound-	-\$/ton-	Total Value -Million dollars-	(compared w/1996 price) -Million dollars-		
1995/96	3.660	28.84	576.80	2,111	28.84	576.80	2,111			
1996/97	3.750	28.84	576.80	2,163	28.06	561.20	2,105	59		
1997/98	4.102	28.84	576.80	2,366	25.66	513.20	2,105	261		
1998/99	4.134	28.84	576.80	2,384	27.02	540.40	2,234	150		
1999/00	4.650	28.84	576.80	2,682	21.90	438.00	2,037	645		
2000/01*	4.131	28.84	576.80	2,383	21.99	439.80	1,817	566		
Total								\$1,681		

	Raw Cane Producer	Beet Sugar Producer	Total
	Lost Income	Lost Income	
	=	Million dollars-	
1996/97	32	59	90
1997/98	30	261	291
1998/99	34	150	184
1999/00	333	645	979
2000/01*	116	566	682
Grand Total	\$545	\$1,681	\$2,226

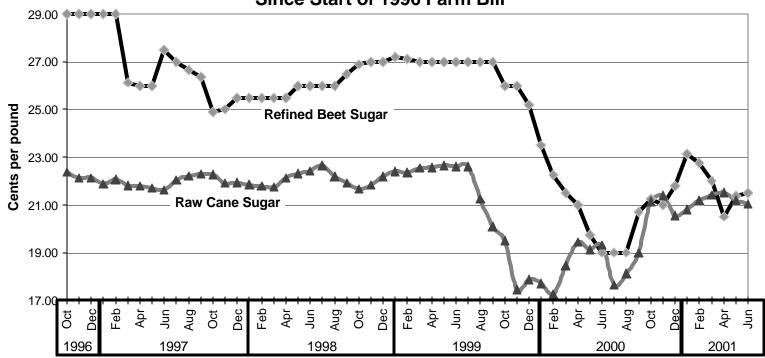
^{*}Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October – March 2000/01 average prices.

Data Source: USDA

Figure 2

California, 2000

U.S. Refined Beet Sugar and Raw Cane Prices Since Start of 1996 Farm Bill



Source: USDA. Wholesale refined beet sugar, Midwest markets; Raw cane sugar, nearby #14 contract, delivered New York. Monthly average prices October 1996 - June 2001.

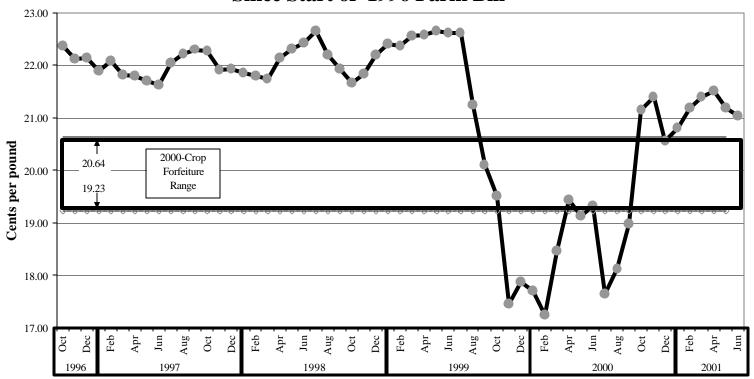
Figure 3
17 PERMANENT SUGAR MILL CLOSURES SINCE 1996

Beet Closures	Cane Closures	
Spreckels Sugar, Manteca	Ka'u Agribusiness	Amfac Sugar, Lihue
California, 1996	Hawaii, 1996	Hawaii, 2000
Holly Sugar, Hamilton City	Waialua Sugar	Hawaiian Commercial & Sugar, Paia
California, 1996	Hawaii, 1996	Hawaii, 2000
Western Sugar, Mitchell	McBryde Sugar	Evan Hall Sugar Cooperative
Nebraska, 1996	Hawaii, 1996	Louisiana, 2001
Great Lakes Sugar, Fremont	Breaux Bridge Sugar	
Ohio, 1996	Louisiana, 1998	
Holly Sugar, Hereford	Pioneer Mill Company	
Texas, 1998	Hawaii, 1999	
Holly Sugar, Tracy	Talisman Sugar Company	
California, 2000	Florida, 1999	
Holly Sugar, Woodland	Amfac Sugar, Kekaha	

Hawaii, 2000

Figure 4

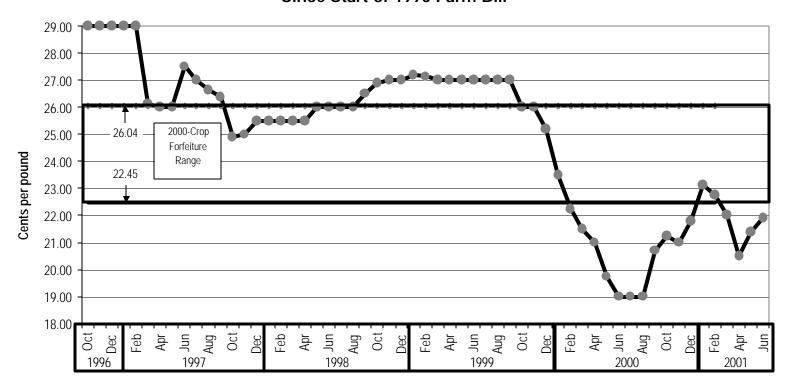
U.S. Raw Cane Sugar Prices Since Start of 1996 Farm Bill



Source: USDA. Raw cane sugar, nearby #14 contract, delivered New York. Monthly average prices October 1996 - June 2001.

Figure 5

U.S. Wholesale Refined Beet Sugar Prices Since Start of 1996 Farm Bill



Source: USDA. Wholesale refined beet sugar, Midwest markets. Monthly average prices October 1996 - June 2001.

Figure 6

Comparative Table: Summary of Policy Measures in Selected Countries, December 2000

	Production Controls ¹		ontrols ¹ — Domestic Price Support — →						Marketin	Grower/Processor Relationships		
	Land	Production	HFCS	Import	Non-tariff	Fixed/Minimum	Regional	Export	Domestic	Single		Fixed/Minimum
	Quotas	Quotas	Quotas	Tariff	Barriers ²	Sugar Prices	Subsidies	Subsidies	Market Sharing/ Sales Quotas	Channel Marketing Domestic	Export	Crop Prices
Argentina				✓								
Australia	✓						✓3		✓	√ ⁴	✓	
Brazil				✓			√ ⁵					✓
China				✓	✓							✓
Cuba				✓	✓	✓			✓	✓	✓	✓
EU			✓	✓		✓		✓	✓			✓
India				✓		✓ 6			✓			✓
Mexico				✓			✓ 7		✓ 8			
Philippines				✓					✓			
Poland				✓		✓		✓	✓			9
Russia				✓	✓							10
Thailand				✓	✓	✓	√ 11		✓			
Turkey				✓		12						✓
US				✓		✓ ¹³						✓ ¹⁴

- Notes: 1. These controls refer to absolute limits on total cane, beet or sugar production, rather than controls on the volume of sugar that can be sold in domestic or preferentially priced markets (see Marketing Arrangements).
 - 2. These include measures such as the retention of single-channel import agencies, the requirement for import licences and import quotas.
 - 3. Although not strictly speaking a regional subsidy, the Australian Federal government granted an industry assistance package to cane growers worth around A\$83 million over the next two years, in the face of damage to the cane crop and low world sugar prices.
 - 4. In Queensland, Queensland Sugar Limited is the sole seller of raw sugar in the domestic market. Refined sugar is marketed independently by individual refiners.
 - 5. Cane growers in the North/Northeast receive a direct subsidy to compensate them for higher costs.
 - 6. For the 30% of the (levy) sugar that is sold through the Public Distribution System, the government establishes a fixed price. For the remaining 70% of sugar, the price is determined by market forces, but the government is able to exert considerable influence over these prices.
 - 7. Although this is not exactly a regional subsidy, the Mexican government, via FINASA, offered the domestic sugar industry a significant discount on debt in exchange for early re-payment, commonly referred to as quitas; this offer was taken up by a number of major milling groups.
 - 8. Producers agree to sell an agreed proportion of their output on the domestic and export markets.
 - 9. There is no national sugarbeet price; the price is negotiated privately between growers and processors.
 - 10. Most sugarbeets are processed on a payment-in-kind basis, under which beet producers deliver beets for processing and receive as payment white sugar equal to about 70% of their beet deliveries. The exact share varies from factory to factory and from season to season.
 - 11. When world sugar prices were very low, the government paid cane payment supplements to cane growers.
 - 12. Although the government continues to announce ex-factory prices for sugar, because Turkseker is no longer the sole seller of sugar, these represent more of a guide than a mandatory price.
 - 13. Applies only when the tariff-rate quota is greater than 1.5 million short tons and loans are non-recourse. Applies only to sugar under loan.
 - 14. Applies only to sugar under loan when loans are non-recourse (i.e., when the tariff-rate quota is greater than 1.5 million short tons). Applies only to beet or cane used to produce sugar under loan.

Figure 7

	Domestic						
Country	Market	Single Ch	nannel Ma	arketing	Licensin	g System	Summary
	Sharing/			_			
	Quotas	Domestic	Export	Import	Export	Import	
Argentina							Independent marketing of sugar.
Australia ¹	\checkmark	\checkmark	✓				Government marketing Board – QSC – handles 95% of raw sugar sales in Queensland.
Brazil	✓				✓		Quotas & export licences designed solely to ensure alcohol production met.
Canada							2 companies dominate the market but are open to competition from imports.
China ²				✓		✓	State-owned trading agency – Ceroil Foods – handles 100% of imports.
Colombia	✓		✓				Industry authority for export – CIAMSA. Mills export pro-rata share of production.
Cuba		✓	✓	✓	✓	✓	State-owned marketing company – Cubazucar – handles 100% of sugar sales.
Dom. Rep.						✓	3 groups control the sugar industry.
EU	✓				✓	✓	Marketing quota system in place to remove surplus sugar from the domestic market.
Fiji		✓	✓	✓			Quasi-government marketing body – Fiji Sugar Marketing Company – handles 100% of sugar sales
Guatemala	✓	✓	✓				2 industry authorities market 100% of sales – DAZGUA (domestic sales) & ASAZGUA (exports).
India			✓		✓	✓	Government controls releases of sugar onto market. Industry authority for exports – ISIEC.
Indonesia		✓		✓			State-owned trading agency – BULOG – handles 100% of imports & almost 100% of domestic sales.
Japan							Independent marketing of sugar. Regulation by quasi-government agency – SPSA – on marketing of sugarbeet/cane.
Korea					✓	✓	3 companies dominate the sugar sector with sole permission to make imports/exports.
Malaysia	✓				✓	✓	Much of industry is controlled by Kuok Group. Only mills & refineries are permitted to import.
Mauritius		✓	✓	✓			Industry authority – MSS – handles 100% of sales.
Mexico					✓		Government-owned marketing body – Azucar SA – abolished & sector deregulated.
New Zealand							1 company dominates the domestic market but it is open to competition from imports.
Philippines	✓					✓	Quedan system establishes marketing quotas to ensure that US quota & domestic needs met.
Russia							4 companies dominate the imports of sugar. Independent domestic marketing.
South Africa	✓	✓	✓	✓			Industry authority – SASA – handles 100% of export sales & domestic market-sharing agreement.
Swaziland	✓	✓	✓	✓			Industry authority – SSA – handles 100% of sales (raw & white).
Thailand	✓						Month-by-month sales are controlled by the TCSC . 4 licensed companies handle exports.
Ukraine					✓	✓	Government agency – Ukrsukr – controls imports & issues import licences.
USA							No marketing alliances are permitted. Restricted competition from imports through TRQ.

Notes: 1. Applies to raw sugar only.

2. Government-owned Ceroil Foods handles all toll refining, i.e., imports of raw sugar/re-export of refined sugar.

U.S. Cost of Production Rank Among World Sweetener Producers, 1994/95 – 98/99

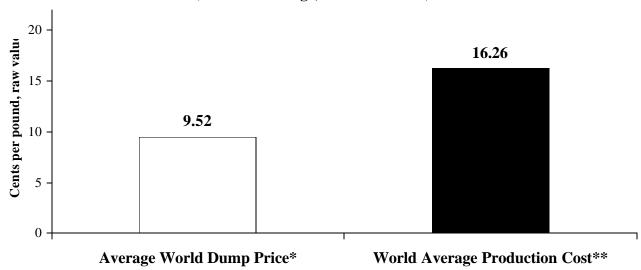
		Number of
		Producing
	U.S. Rank	Countries/Regions
Beet Sugar	2	40
Cane Sugar	26	63
All Sugar	28	102
Corn Sweeteners	1	19
All Sweeteners	21	112

Source: "The LMC Worldwide Survey of Sugar and HFCS Production Costs: The 2000 Report," LMC International Ltd., Oxford, England, December 2000.

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Figure 9

World Sugar Dump Market Price: Barely More Than Half the World Average Cost Of Producing Sugar (16-Year Average, 1983/84 - 98/99)

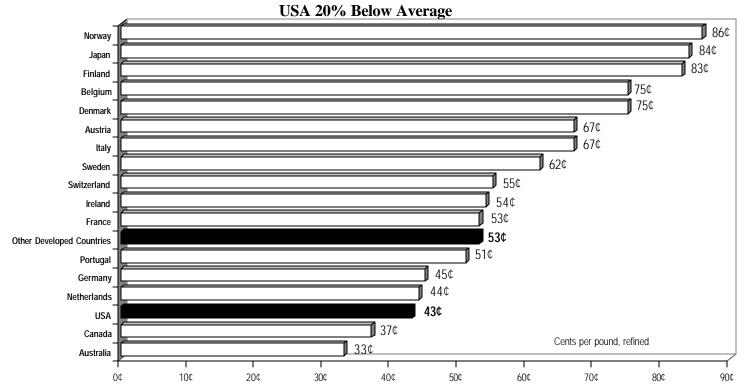


^{*}New York contract #11, f.o.b. Caribbean ports. Source: USDA.

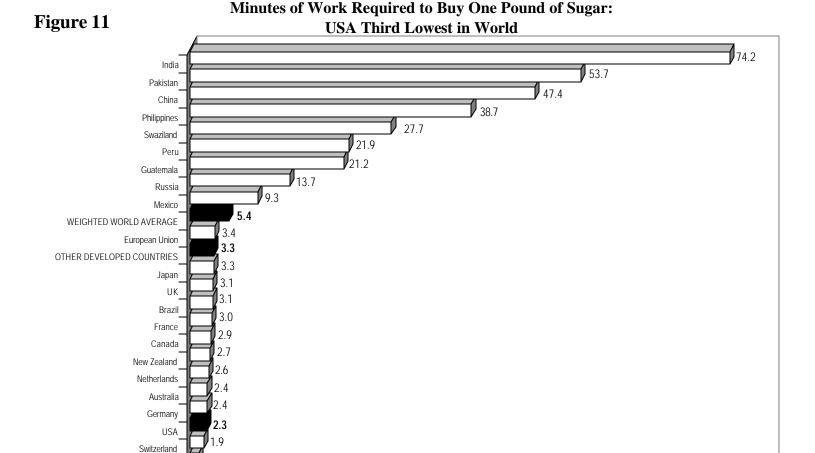
^{**}Beet and cane sugar weighted average, raw value. Source: "The LMC Worldwide Survey of Sugar and HFCS Production Costs: The 2000 Report," LMC International, Ltd., Oxford, England, December 2000.

Figure 10

Developed Countries' Retail Sugar Prices:



Source: LMC International Ltd., Oxford, England, February 2000; 1999 prices. "Other Developed Countries" represents the weighted average of 22 foreign developed countries.



30.0

40.0 Minutes

60.0

70.0

80.0

Source: LMC International Ltd., Oxford, England, February 2000. Study of 49 countries, accounting for 78% of global sugar consumption; 1999 prices. Based on 1997 World Bank per capita GNP data. "OTHER DEVELOPED COUNTRIES" represents the weighted average of 20 foreign developed countries.

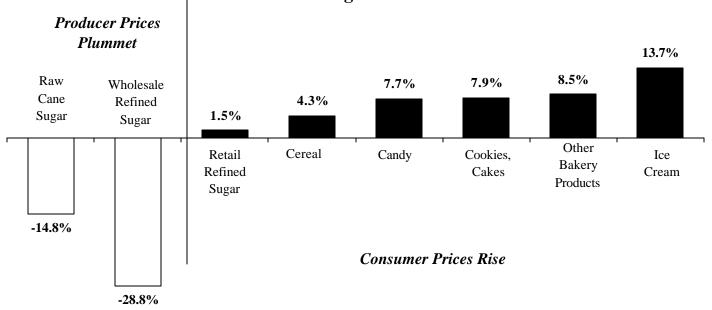
20.0

10.0

Singapore

Figure 12

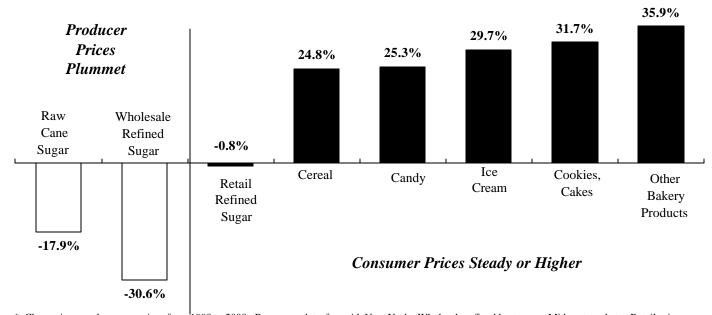
From 1996 to 2000: Producer Prices for Sugar Plummet, Consumer Prices for Sugar and Sweetened Products Rise



Annual average prices, 1996 compared with 2000. Raw cane: Duty-fee paid, New York. Wholesale refined beet: Midwest markets. Retail prices: BLS indices. Data source: USDA.

Figure 13

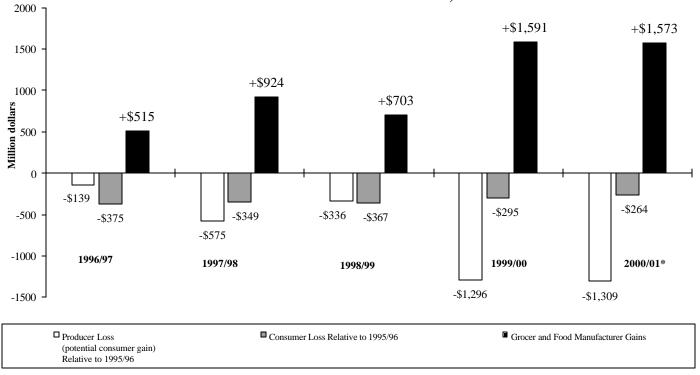
From 1990 to 2000: Producer Prices for Sugar Plummet, Consumer Prices for Sugar & Products Steady or Higher*



^{*} Change in annual average prices from 1990 to 2000. Raw cane: duty-fee paid, New York. Wholesale refined beet sugar: Midwest markets. Retail prices: Bureau of Labor Statistics consumer price indices. Data source: USDA.

Figure 14

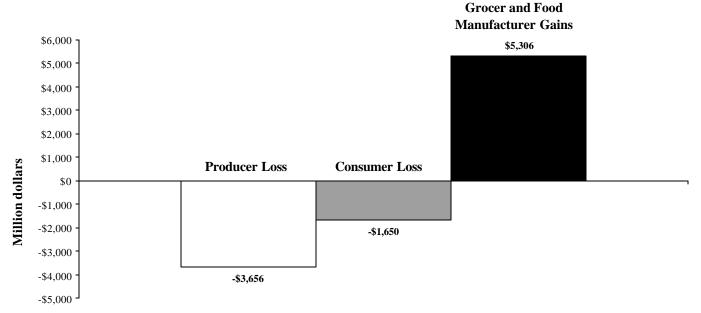
Sugar and Product Price Changes Since 1996: Producer and Consumer Losses and Grocer and Food Manufacturer Gains, 1997-2001



*Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October – March 2000/01 average prices.

Figure 15

Sugar and Product Price Changes Since 1996: Producer and Consumer Losses and Grocer and Food Manufacturer Gains, 1997-2001



^{*}Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October – March 2000/01 average prices. Data Source: USDA

Figure 16

Sugar and Product Price Changes Since 1996: Producer and Consumer Losses and Grocer and Food Manufacturer Gains, 1997-2001

			Producer 1	Losses		Consumer	Losses	
			ale Refined ar Price	Producer Loss (potential consumer gain) Relative to 1995/96		Consumers, ugar Price	Consumer Loss Relative to 1995/96	Grocer and Food Manufacturer Gains
Fiscal Year	Refined Sugar Consumption	<u>Actual</u>	Change from <u>1995/96</u>	<u>Total</u>	<u>Actual</u>	Change from <u>1995/96</u>	<u>Total</u>	
	-Million short tons-	-¢/pound-	-¢/pound-	-Million dollars-	-¢/pound-	-¢/pound-	-Million dollars-	-Million dollars-
1995/96	8.828	28.84			41.15			
1996/97	8.938	28.06	-0.78	-139	43.25	+2.10	-375	+515
1997/98	9.039	25.66	-3.18	-575	43.08	+1.93	-349	+924
1998/99	9.226	27.02	-1.82	-336	43.14	+1.99	-367	+703
1999/00	9.339	21.90	-6.94	-1296	42.73	+1.58	-295	+1591
2000/01*	9.556	21.99	-6.85	-1309	42.53	+1.38	-264	+1573
Total				-\$3,656			-\$1,650	\$5,306

	Total Producer Losses from Lower Wholesale Price	Percent of Producer Loss Passed Through to Consumers	Total Consumer Losses from Higher Retail Prices	from L	ower Produ	anufacturer Gains ncer Prices and ar and Product **
1996/97	-Million dollars- -139	% 0	-Million dollars- -375	<i>Total</i> +515	Grocers +206	Food Manufacturers +309
1997/98	-575	0	-349	+924	+370	+554
1998/99	-336	0	-367	+703	+281	+422
1999/00	-1296	0	-295	+1591	+637	+955
2000/01*	-1309	0	-264	+1573	+629	+944
Total	-\$3,655	0	-\$1,650	\$5,306	\$2,122	\$3,184

^{*}Projected, based on April 2001 USDA World Agricultural Supply and Demand Estimates report and October - March 2000/01 average prices.

Data Source: USDA

^{**}Approximately 40 percent of U.S. sugar consumption is direct, the remainder is an ingredient in food products.

Figure 17

Crop Shares of Total Value of Production and Government Expenditures; Government-Payment Shares of Crop Returns

FY 2000

Government payments as a % of 1997/98-1999/00 Avg. each crop's total **Value of Production** CCC Outlays in FY 2000 returns Million dollars % of Total Million dollars % of Total Corn for Grain \$19,741 34.8% \$9,696 38.2% 26.4% \$1,095 1.9% Sorghum \$942 3.7% Barley \$700 1.2% \$393 1.5% \$214 Oats 0.4% \$63 0.2% Wheat \$6,990 12.3% \$5,417 21.4% 38.4% \$1,729 Rice \$1,567 2.8% 6.8% 56.4% Cotton \$4,644 8.2% \$4,206 16.6% 44.8%* \$2,749 4.9% \$301 Tobacco 1.2% - -Soybeans \$14,439 \$2,425 25.5% 9.6% 18.1% Peanuts \$1,040 1.8% \$42 0.2% - -Sugar** \$3,480 \$141 6.1% 0.6% Total \$25,355 \$56,659 100.0% 100.0%

Data sources: USDA's Economic Research Service and Farm Service Agency

^{*} FY 1999

^{**} Crop value adjusted from ERS published figure of \$2.088 billion, which represents 60% (grower share) of the actual value of sugar production.

Appendices

Appendix A

The "Stuffed Molasses" Sugar Import Loophole

The pace of imports of sugar syrups commonly referred to as *stuffed molasses* under HTS subheading 1702.90.40 has risen dramatically in just the last several years. According to Customs Service data, published by the U.S. Department of Agriculture in its January 2001 "Sugar and Sweetener Situation & Outlook" report, in calendar year 1995, only 1,702 metric tons of *stuffed molasses* was imported into the United States. (One metric ton of syrup yields .55 short tons raw value of sugar.) Syrup imports rose to 14,517 metric tons in 1996; 68,838 in 1997; 166,240 in 1998; 233,748 in 1999; and 174,135 tons through November 2000.

On a fiscal year basis, applying the 55% formula to convert from metric tons of syrup to short tons of raw sugar equivalent, USDA data shows the amount of sugar entering the U.S. market though the *stuffed molasses* loophole has exploded:

- FY 95/96 = 8,056 short tons raw sugar
- FY 96/97 = 21,079
- FY 97/98 = 83,261
- FY 98/99 = 114,695
- FY 99/00 = 118,104
- FY 00/01 = 125,000 (estimated by USDA)

Background

In the mid-1990s, London-based ED&F Man, the world's largest sugar trader with agriculture commodity operations in 60 countries, set up a subsidiary in Ontario, Canada to blend low-priced dump-market sugar from Brazil and other countries with molasses and water. The mixture is carefully concocted to exploit the HTS loophole so the syrup can evade legitimate U.S. import duties. The syrup, commonly known as *stuffed molasses*, is exported into Michigan to Heartland By-Products, Inc. (also set up as a subsidiary of ED&F Man), where liquid sugar is removed from the mixture and the remaining molasses is returned to Canada to start the stuffing process again. The sugar derived from the reverse-processing of *stuffed molasses* after it enters the United States is then sold at low prices, undercutting American sugar producers and legitimate exporting countries that ship under the U.S. sugar import TRQ.

In 1995, Heartland sought to have the Customs Service office in New York City rule that *stuffed molasses* is classified under subheading 1702.90.40, and the request was granted. In 1998, U.S. sugar producers petitioned the Customs

Service to investigate the quota-circumvention scheme. After 20 months of consideration, Customs revoked the Heartland letter in 1999 and classified *stuffed molasses* in a subheading subject to the tariff-rate quotas. According to the Customs Service, "it is clear" that Heartland did not provide the New York office with "essential information" when it requested the 1995 ruling. Heartland appealed this decision to the courts, and received a favorable ruling from the U.S. Court of International Trade on the classification issue. The U.S. Government and the U.S. sugar industry have appealed the CIT's ruling, and the matter is now under review by the U.S. Court of Appeals for the Federal Circuit. Oral arguments were heard in February 2001, and a ruling is expected soon.

A favorable decision by the Court of Appeals could effectively remedy the *stuffed molasses* TRQ circumvention by Heartland, but this is only the tip of the iceberg. Other commodities traders are poised to mimic ED&F Man in the sugar TRQ circumvention business, and the recipes for new products to exploit loopholes in the tariff schedule are limited only by the creativity of these border operators. Enactment of the Beaux/Craig bill (S. 753, introduced April 6, 2001) will specifically address the circumvention by the so-called *stuffed molasses* product, but more importantly it also will clarify the Customs Service's authority to act quickly to apply the sugar import quotas to other circumvention products in the future found to be imported for the purpose of commercial extraction of sugar for human consumption.

Implications for WTO and NAFTA

Including a circumventing good in the sugar tariff-rate quotas could conceivably lead to a claim that the United States is not observing its WTO obligation not to impose a duty on that good above a specified rate. The claim would be for compensation (typically a tariff reduction) based on the value of trade affected. If the Customs Service administers the bill properly, new attempts to circumvent the sugar tariff-rate quotas will be stopped quickly, before any significant trade can develop. Therefore, even if a claim for compensation were warranted, it would be extremely small, and could be addressed under existing WTO rules and U.S. law.

The foreign suppliers to the U.S. market, such as Brazil and Caribbean Basin nations, are strongly opposed to circumvention of the sugar tariff-rate quotas because circumvention forces USDA and the Office of the U.S. Trade Representative to reduce the quotas to protect the sugar program. In a letter to a member of the U.S. Senate in 1999, USTR Ambassador Charlene Barshefsky correctly identified *stuffed molasses* as an artifice to deceive when she stated, "From a commercial perspective, these imports appear to be simply a vehicle to bring raw sugar into the U.S. market free from the tariff applicable to sugar imported outside of the sugar tariff rate quota." The result of this TRQ

circumvention is that sugar supplying countries ship less sugar to the United States at preferential domestic U.S. prices.

The *stuffed molasses* imported from Canada does not originate in Canada for purposes of NAFTA preferential treatment or under U.S. customs law. The sugar component apparently has come principally from Brazil, Colombia, and Australia.

If Canada does complain about plugging the *stuffed molasses* loophole, it will only be abetting ED&F Man's efforts to undermine an important U.S. Government program, the sugar price support program. The result will be unstable sugar prices in the United States, leading to more beet and cane farm failures, more sugar processing factory closures, and forfeitures of USDA sugar loans at a significant cost to the U.S. Treasury. American consumers will not benefit, as recent history shows that industrial sugar users do not pass along the savings when their wholesale cost of sugar declines.

Appendix B

U.S.-Mexico Sugar Trade Issues

When NAFTA Was Negotiated, 1992-93:

- Mexico had been a deficit sugar producer for five years of six, 1988/89-93/94
- Mexican imports and consumption of corn sweeteners were minimal
- Mexico had a minimal share of the U.S. import quota -- about 7,000 metric tons
- U.S. and Mexican governments assured the U.S. Congress that Mexico would remain a deficit sugar producer

Original NAFTA Sugar Provisions:

- Opened Mexican market to U.S. high fructose corn syrup (HFCS)
- Encouraged Mexico to substitute HFCS for sugar by allowing Mexico to export all displaced sugar to U.S. market: three-fold increase to 25,000 tons in 1994-2000; all surplus production in 2001-2007 (surplus production = sugar production minus sugar consumption); second-tier (over-quota) tariff drops from 16 cents per pound of raw sugar in 1994 to zero in 2008; common market beginning in 2008
- American sugar producers vehemently opposed

NAFTA Sugar Side Letter:

- Negotiated by U.S. and Mexico prior to U.S. vote, November 1993
- Limited 2001-07 access to up to 250,000 tons of surplus production -- roughly 35 times traditional Mexican access; changed surplus producer definition to sugar production minus sugar *and* HFCS consumption; *no* change in secondtier tariff phaseout
- Won NAFTA passage in Congress

Developments Since NAFTA Inception, January 1994:

- Mexican government has provided subsidies amounting to over \$1.6 billion since NAFTA entered into force for the purchase of facilities, the financing of these purchases, sugar storage, and virtually all other aspects of sugar production
- Mexican sugar production exploded 1.22-million-ton, or 33%, increase post-NAFTA in 1994/95-99/00 average over 1988/89-93/94 pre-NAFTA average; pre-NAFTA 455,000-tons/year average deficit transformed to 631,000-ton average surplus

- Mexico imposed high antidumping duties, which were found to be inconsistent
 with WTO rules, on U.S. HFCS. These duties effectively limited imports of
 U.S. HFCS to an average of 158,000 tons/year, but Mexican consumption of
 corn sweeteners has also exploded, to about 500,000 tons/year most of it
 domestically produced
- Mexico renounced the sugar side letter and attacked its validity in formal NAFTA dispute settlement
- U.S. government agrees to renegotiate side letter, but Mexican proposals will not produce fair trade
- In the presence of both Mexican and worldwide sugar market distortions, U.S. sugar policy is the only way to ensure fair trade in sugar.
- American producers suggest sugar ethanol program to relieve Mexican problems of sugar surplus, potential rural job losses from sugar mill closures, and air and water pollution

Appendix C

U.S. Sugar Industry Position on the FTAA

U.S. Sugar Industry's Free Trade Position

U.S. sugar producers are efficient by world standards with costs of production below the world average, despite the highest environmental and labor standards in the world. Because of our competitiveness, we have endorsed the goal of genuine, multilateral free trade in sugar since the onset of the Uruguay Round of the GATT in 1986. Ultimately, we want to see free trade in sugar include all countries and all government programs. But that will require some doing. Genuine liberalization of trade in sugar must address all market distortions and circumvention, not just import barriers.

Market Distortions

More than 120 countries produce sugar, and in all these countries the government intervenes in the sugar marketplace. The worst of these distortions involves a combination of import protection and production and export subsidies. This combination results in huge over-production, which is dumped on the world market, thus injuring the producers of other countries unless their governments, in turn, protect their markets. The world market for sugar is so distorted by these aggressive practices of over-production that over the past two decades the "world price" has averaged barely half the world average cost of producing sugar, according to independent studies.

U.S. sugar policy is designed primarily to ensure that the U.S. market is not distorted by these aggressive over-production policies. If these subsidies and other market distortions were removed, then the U.S. sugar industry would support negotiations that led to reciprocal reductions in import barriers for sugar. But without this crucial step, such reductions would only encourage government subsidies to destroy efficient producers.

Circumvention

In a world market so undermined by market distortions in national markets, the incentive to evade existing WTO disciplines on sugar trade is enormous. As a result, some countries can become "blending platforms," which import third-country dump-market sugar for manufacture of sweetened products that are then exported. Bilateral and regional agreements can make this problem worse,

because "blending platforms" within a free area can export duty-free within the free area, undermining WTO agreements on market access for sugar. Or, new agreements can act on the problem, by including provisions that address this form of circumvention.

Sugar is *Not* Included in Most Bilateral and Regional Agreements

Because of the uniquely distorted nature of the world dump market for sugar and because of a wide range of border control issues, sugar has overwhelmingly been excluded from bilateral and regional free trade agreements. The Food and Agriculture Organization of the United Nations noted last year:

"There are 124 regional trade agreements worldwide at this time, most of which substantially exclude sugar." Some examples:

- Sugar is excluded from the Mercosur agreement among major producers Argentina and Brazil, with Uruguay and Paraguay.
- Though Mexico reportedly has more bilateral and regional trade agreements than any other country, it has excluded sugar from virtually every one, including its recent agreement with the European Union. The EU is the world's second largest exporter of sugar, thanks to massive production and export subsidies.
- Sugar is excluded from the U.S.-Canada portion of the North American Free Trade Agreement (NAFTA), which defers to WTO disciplines instead.

Sugar is included in the U.S.-Mexico portion of the NAFTA, but the sweetener provisions are embroiled in controversy. Mexico is blocking imports of U.S.-made corn sweeteners that compete with sugar in Mexico, and Mexico insists on accelerating the NAFTA schedule of its sugar access to the U.S.

With sugar excluded from so many free trade agreements, including agreements in this very hemisphere, the challenge of including sugar in the FTAA is, at best, daunting.

The U.S. Is Already a Major Sugar Importer; Market Is Saturated

The United States has committed, under WTO and NAFTA rules, to import, at a minimum, a volume of sugar amounting to about 15 percent of U.S. consumption, duty free. The U.S. must import this sugar whether the domestic market requires it or not, making the U.S. the world's fourth largest importer of sugar. Twenty two

countries in this hemisphere already benefit from essentially duty-free access to the U.S. market, representing 65 percent of U.S. imports.

In addition, we have experienced import leakage, of blended product from Canada and above-quota sugar from Mexico. These imports, coupled with unusually large U.S. production, inundated the U.S. sugar market the past two years and depressed the domestic sugar price to a 22-year low in 2000. The industry is badly oversupplied and in a severe financial crisis, with beet and cane mills closing, and the country's largest refined sugar seller in bankruptcy. The U.S. market has no room for additional foreign sugar.

In the FTAA: Negotiate Real Open Trade or Reserve Sugar for WTO Disciplines

Given the highly distorted nature of the world dump market for sugar and the inability so far of most regional trade agreements to address market distortions, the U.S. sugar industry believes that negotiations on sugar provisions in the FTAA would be so contentious they would delay the wider package. The U.S. sugar industry, therefore, recommends that, within the framework of the FTAA, sugar be reserved for much needed, and more far reaching, disciplines in the multilateral, WTO context.

Appendix D

Proposal for USDA Commodity Loans for In-Process Sugars and Syrups

Implementation of a Commodity Credit Corporation non-recourse loan for intermediate-stage processed sugars and syrups would provide an important mechanism to enhance the operation of the sugar price support loan program. USDA-CCC loans are an important source of financing that enables processors to make the significant up-front payments to sugar producers for their crops. Substantial additional financing is required for these grower payments and for the very seasonal cost of processing operations whereby beets are converted into refined sugar and cane to raw sugar.

In today's depressed farm economy, reliable sources of agricultural financing are becoming more and more difficult to secure, and availability of a CCC loan for inprocess syrups could be the difference in some operations as to whether processors can survive the current downturn. A loan rate could be established that recognizes the value of in-process sugar in relation to the raw cane loan rate and the refined beet sugar loan rate. An in-process loan rate at 80 percent of the refined rate is suggested. It is recommended that the proposed CCC non-recourse "thick juice" loan terms include a requirement for any forfeiting processor to convert the in-process syrup to refined sugar within 60 days of the date of forfeiture, or by September $30^{\rm th}$, whichever is sooner. Further, under such forfeiture circumstances, the loan terms should provide that once the conversion to refined sugar has occurred, the CCC shall provide that processor the net difference in loan proceeds (for example, 100% - 80% = 20%) to account for the input costs (i.e., value) of syrup versus refined sugar.

Prior to 1960, sugar factories were designed with "balanced" beet and sugar end capacities, allowing sugar from beets sliced to be directly processed on the sugar end. However, with beet quality and processability so highly influenced by a combination of weather-related factors and agronomic practices which could vary significantly each year, the desired balance was rarely consistently realized, causing less-than-optimal processing efficiencies. That, coupled with a pursuit of the economic benefits associated with higher throughput, equipment utilization, and sugar storage to satisfy marketing cycles, directed the sugar industry to a concept that was first done on a full scale in 1960, and is almost universally applied today--thick juice storage. Thick juice, the purified and concentrated syrup produced through the beet end of a sugarbeet processing factory, is the base syrup from which granulated sugar is crystallized on the sugar end. Factories have taken advantage of thick juice storage to allow increased beet slicing capacity

without increasing the size of sugar ends by storing the additional thick juice generated by the higher daily slice.

Additionally, with the advent of molasses desugarization through a chromatographic separation process, sugarbeet molasses is stored as an in-process syrup inventory. Separator feed molasses (60-65% sugar on solids) is the exhausted mother liquor resulting from the conventional crystallization process. It is considered a very stable material. At its typical 80-82° brix, it is essentially protected against any microbiological activity. A ton of separator feed molasses contains approximately 6.5 to 7.5 hundredweight of extractable granulated sugar. This separator feed molasses is processed through the separator into additional thick juice. The cost of converting separator feed molasses to thick juice is approximately \$2.50 per refined hundredweight.

Thick juice (90-91% sugar on solids), in its stored form, is a high purity, pH adjusted, cooled sugar syrup concentrated to 68-69E brix, which contains approximately 10 to 11 hundredweight of extractable granulated sugar per ton of juice. It is filtered to remove spores and organisms not killed by heat, and also any particles that might act as nuclei for crystallization during storage. When the pH-adjusted juice is kept as close to saturation as possible, most micro-organisms, such as yeasts and molds, will normally not develop or grow. The cost of converting thick juice into granulated refined sugar is approximately \$1.50 per refined hundredweight.

Sugarbeet molasses separator feed and/or thick juice is stored in four to six million gallon steel tanks, each representing 250,000-350,000 hundredweight of granulated sugar equivalent. These tanks and associated systems are cleaned and sterilized before use, and all syrup quality parameters are regularly measured and monitored, both prior to and during storage. At a peak level in February, most syrup storage tanks are full. By the end of the crop year on September 30th, virtually all syrups from the previous campaign have been processed into granulated refined sugar.

Given the above, which are all part of standard operating and quality control procedures, in-process syrup storage has, for 40 years, proven to be a viable and economically-efficient method for successfully storing sugar in quantity for up to one year, without significant loss or deterioration. This also allows it to be processed with no more, and often less, difficulty than fresh juice before storage.

The concept of sugar stored in an in-process state through molasses separator feed and thick juice is not unlike the storing of raw cane sugar which is also an in-process form that is subsequently further processed into final refined consumable sugar.